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(19) **United States**(12) **Patent Application Publication**  
**Guelcher et al.**(10) **Pub. No.: US 2011/0236501 A1**(43) **Pub. Date: Sep. 29, 2011**(54) **INJECTABLE DUAL DELIVERY  
ALLOGRAPH BONE/POLYMER COMPOSITE  
FOR TREATMENT OF OPEN FRACTURES****Publication Classification**(75) Inventors: **Scott A. Guelcher**, Franklin, TN  
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Raolett (GB)(51) **Int. Cl.**  
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*A61K 38/18* (2006.01)(73) Assignee: **Vanderbilt University**(52) **U.S. Cl. .... 424/549; 514/40; 514/8.2; 514/8.8**(21) Appl. No.: **13/005,481**(22) Filed: **Jan. 12, 2011**(57) **ABSTRACT****Related U.S. Application Data**(63) Continuation-in-part of application No. 12/676,710,  
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A biodegradable polyurethane scaffold, comprising at least one polyisocyanate, polyisocyanate prepolymer, or both, at least one polyester polyol, at least one catalyst, wherein the density of said scaffold is from about 50 to about 250 kg m<sup>-3</sup> and the porosity of the scaffold is greater than about 70 (vol %) and at least 50% of the pores are interconnected with another pore, and wherein the scaffold incorporates at least one biologically active component in powder form.

